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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/558,097

12/06/2006

Jun-han Kang

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EXAMINER

BULLOCK, IN SUK C

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

01/11/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/558,097	Applicant(s) KANG ET AL.	
	Examiner IN SUK BULLOCK	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

Reference SU 1011236 has been considered by the examiner.

Response to Amendment

Amendment to claims 2, 11, and 18 is acknowledged. Claim 1 is canceled. No new claim has been added. Thus, claims 2-21 are currently pending in this application.

Objection to claim 18 is withdrawn in view of the amendment filed.

Rejection of claims 18-21 under 35 U.S.C. 112, second paragraph, is also withdrawn in view of the amendment filed.

Claim 1 rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Patent 4,217,333 to Loblich is withdrawn.

Claims 1-8 and 10-21 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2005/0080308 to Jeong et al. is withdrawn.

The following is a new ground of rejection in response to the amendment and remarks.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,217,333 to Loblich (hereinafter "Loblich").

Loblich discloses a composition comprising potassium magnesium phosphate (abstract). Loblich further discloses a process for producing potassium magnesium phosphate comprising reacting under aqueous conditions (a) mono or dibasic magnesium phosphate, (b) potassium chloride, and (c) an alkaline magnesium compound (col. 2, lines 46-56). The composition is dried and heated (Example 1 in col. 8).

Loblich fails to disclose a carrier for the composition.

However, it is well known in the art to employ a catalyst composition either supported or unsupported. It is also well known in the art that generally the support does not participate in chemical reactions and is mainly used for attrition resistance, stance, etc. Therefore, it would have been obvious to one skilled in the art to have modified the composition of Loblich by including a support for myriad of reasons such as attrition resistance. Further, one skilled in the art may select any number of known supports including those claimed by applicants.

With regard to claims 5 and 11-14, it is noted that these are product-by-process claims. Where the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to the applicants to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983).

With regard to claimed recited particular precursors of each component of the catalyst (claim 9), it would have been obvious to one skilled in the art to have selected any precursors to obtain the claimed catalyst absent a showing of criticality.

Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,217,333 to Loblich (hereinafter "Loblich") as applied to claims 2-17 above, and further in view of U.S. Patent 3,852,188 to Dugan et al. (Dugan).

The teachings of Loblich are as discussed above.

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Loblich fails to disclose using the composition in a hydrocarbon steam cracking process.

Dugan teaches a composition similar to Loblich and further teaches using the composition in a hydrocarbon steam cracking process (abstract; col. 5, lines 25-56).

Therefore, it would have been obvious to one skilled in the art to employ the composition of Loblich in a hydrocarbon steam cracking process because Dugan has taught similar composition for employment in said process.

Response to Arguments

Applicant's arguments have been fully considered and are persuasive. The rejections of previous Office Action have been withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IN SUK BULLOCK whose telephone number is (571)272-5954. The examiner can normally be reached on Monday - Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/In Suk Bullock/
Primary Examiner, Art Unit 1797